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TI - MATRIX FOR FUEL CELL

AB - PURPOSE: To make better the impregnation and retention properties of an electrolyte as well as to secure such an electrolyte matrix as getting its mechanical strength improved, by having a silicon carbide fiber bonded with reticulate fluorocarbon resin in a state of being intertwined with each other.

- CONSTITUTION: Fluorocarbon resin is added to a silicon carbide fiber (whicker) consisting of an aciculate single crystal body of about 0.1-1 $\mu$ m in diameter and about 50-200 $\mu$ m in length and kneaded. This mixture is applied to the top of an air pole of a fuel cell and dried up and undergone with heat treatment whereby such a matrix as bonded in a state that the silicon carbide fiber is intertwined with the reticular fluorocarbon resin is formed. Since this matrix has much of an impregnation quantity of an electrolyte, a long-lived battery is obtainable. Likewise, it is large in mechanical strength, besides ease of handling or maintenance.